



The

Authority View

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The PFAS Problem Demands a Comprehensive Approach

By Peggy Gallos

Media attention appears to be focused on PFAS pollution in water. That may be leaving the misimpression that water is where the problem begins and ends.

As water and sewer professionals know, PFAS (per- and polyfluoroalkyl substances) are a group of man-made

chemicals used in a wide variety of products since the 1940s which are known for persistence in the environment and for posing potential health risks.

Many water and sewer utilities are helping society address the PFAS problem. New Jersey drinking water utilities treat water for PFAS when concentrations exceed safe levels. Sewer utilities have partnered with NJDEP to attempt to track back PFAS discharges from industrial, commercial, and residential users by applying state-of-the-art testing technology, and when significant levels are identified, requiring reductions from the source using pretreatment systems or changes to products that do not contain PFAS.

The problem goes beyond water, however. PFAS are found in soil worldwide, in indoor and outdoor air, in food, and in many other things as well. They are deeply embedded in our daily lives. The 14,000 PFAS are widely used because they are so successful at resisting water, oil, grease, and heat. Many everyday products and devices contain PFAS—cosmetics, personal care products, pesticides, non-stick cookware, take-away food packaging, carpeting and furniture, clothing, small appliances, and fire-fighting foam. PFAS earned the name “forever chemicals” for good reason.

They employ a particularly strong chemical bond that can't easily be degraded and persists in the environ-

A consequence is that more and more water/sewer customers carry an unfair share of the cost burden for PFAS control.

ment and in our bodies. PFAS have been detected in human blood and in fish.

Some PFAS have been linked to health problems. Many have not yet been studied. An EPA publication titled, “Our Current Understanding of the Human Health and Environmental Risks of PFAS,” states that peer-reviewed scientific studies have shown that exposure to certain levels of PFAS is linked to reproductive and developmental effects, increased risk of some cancers, reduced resistance to fight infections, interference with the body's natural hormones, and increased cholesterol levels and/or risk of obesity.

There are other considerations that come into play with PFAS. These man-made chemicals give some products such as medical devices features integral and essential to their usefulness. Semi-conductor production, for example, depends on PFAS, and in fact, manufacturers are increasing production of semi-conductors to respond to the growing

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use of Artificial Intelligence (AI). The American Chemistry Council calls PFAS “a diverse universe of chemicals that makes possible the products that power our lives.”

The EPA also says there is no precisely clear definition of what constitutes PFAS. EPA defines PFAS chemicals as those having “at least two adjacent carbon atoms, where one carbon is fully fluorinated and the other is at least partially fluorinated.” On the other hand, the European Chemicals Agency (ECHA) defines PFAS as “one fully fluorinated methyl (CF₃-) or methylene (-CF₂-) carbon atom (without any H/Cl/Br/I atom attached to it).”

Conflicting definitions is one of the factors complicating the establishment of regulations. Even so, in 2024, EPA finalized federally enforceable maximum contaminant levels (MCLs) and non-enforceable, health-based maximum contaminant level goals (MCLGs) for PFOA, PFOS, PFHxS, PFNA, HFPO-DA, or GenX, and mixtures of PFHxS, PFNA, HFPO-DA, and PFBS. Then, this year, the Trump Administration announced that it is modifying the EPA approach to PFAS, slowing down implementation on two substances, (PFOA and PFOS) and starting from scratch on the others.

In 2017, the NJ Department of Environmental Protection (NJDEP) adopted drinking water limits, groundwater discharge limits, and established private well testing rules for several PFAS. In 2025, NJDEP directed certain New Jersey wastewater treatment plants to monitor selected PFAS. EPA and several states are studying PFAS in biosolids and leachate from landfills, and in some

cases, regulations have been adopted.

According to the website ALL4inc.com, 10 states have water regulations in progress; 26 states and the District of Columbia have promulgated water regulations. They cover PFOS, PFOA, PFBS, PFHxS, PFNA, PFBA, PFHxA, GenX, PFHpA, and PFDA. The site says 14 states either have not promulgated regulations for water or have not posted relevant information.

The cost of treating water for PFAS is enormous. According to the American Water Works Association (AWWA), new drinking water treatment for PFAS will reduce exposure for 35 million Americans. AWWA says there are more than 7,000 entry points in drinking water systems that will require treatment technology. AWWA estimates the cost at \$37.1 to \$48.3 billion in the next five years. Combined with costs of operations and maintenance, the annualized cost is estimated to be \$2.7 to \$3.5 billion.

Successful lawsuits against manufacturers of PFAS chemicals can contribute, to some extent, to covering the enormous cost. Earlier this year, 3M and DuPont settled lawsuits involving drinking water utilities for more than \$1.1 billion. Individual and class-action suits are still being litigated. New Jersey and 3M reached a \$450 million settlement in a PFAS case where water contamination was tied to DuPont's Chambers Works site. The deal includes over \$60 million for cleanup and “natural resources damages” starting in 2026, with payments stretching to 2050. Maryland sued 3M for consumer product-related PFAS contamination, and South Carolina's suit is related to military-grade aqueous film-forming



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foam (AFFF). There is a suit in Alabama federal court initiated by 50 plaintiffs that names 3M, DuPont, Chemours, and Tyco. Ohio has seen court action over PFAS. The investor-owned utility Aqua Essential Utilities sued over PFAS in Pennsylvania. Atlantic City Municipal Utilities Authority (ACMUA) is pursuing legal action against manufacturers DuPont and 3M to help cover its treatment costs.

Removing PFAS from drinking water and sources of drinking water is the obvious starting point. Given the widespread use of PFAS, however, it cannot be the end point. A much more robust and comprehensive approach that includes water regulation is essential. A many-pronged approach implemented on multiple fronts acknowledges economic, practical, technological and diagnostic complexities of the challenge. We can't simply stop using all PFAS, yet we must act because of PFAS' well-documented health risks and its contamination in our environment.

Making water and sewer utilities the exclusive means of dealing with PFAS will not solve the overall PFAS problem. It is, in fact, a “fool's errand”

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that will cost billions with no chance of fully protecting the public health. And there is no rational basis to assume lawsuits against manufacturers, even if successful, can cover the total expenditure necessary to treat water and protect the public health from PFAS contamination.

New Jersey water regulators should acknowledge reality and reconsider their apparent intention to propose PFAS stream standards. Proceeding will cost wastewater customers billions. Proceeding will not achieve the desired health and environmental outcomes anticipated and in effect advances the misconception that the PFAS problem can be fixed through water and sewer regulations. A better approach is to calibrate water-related regulatory action to align with actual technological and analytical capabilities currently available.

The NJDEP could also use its "bully pulpit" to help the public understand PFAS and the need for a multi-pronged PFAS solution. This includes more research to understand the long- and short-term health risks of all PFAS and reducing widespread use of PFAS. Eliminating them completely in any products where this is feasible is critical in the near term. Manufacturing sites where PFAS are made or used need to be carefully monitored and regulated to prevent

pollution. We need to develop technology that destroys PFAS. There should be product labeling requirements so that consumers can choose not to buy products containing PFAS.

Past approaches to other chemical contaminants such as PCBs, chlordane, and asbestos have limited applicability with PFAS. There are 209 PCB chemical compounds compared to 14,000 PFAS chemicals (15,000 by some estimates). Chlordane impacts were more localized and easier to manage once its use was stopped. Asbestos fibers can remain in the environment for a long time, but they have not been spread as widely as PFAS.

No question, addressing PFAS will be extraordinarily hard. But in some places, the work has already begun. Efforts to ban and mitigate PFAS are underway here in New Jersey. Sen. Linda Greenstein is working with stakeholders on a PFAS ban bill. Another NJ legislative committee recently released a bill concerning PFAS chemicals in firefighting foam. H.R. 8074, the Forever Chemical Regulation and Accountability Act of 2024, was introduced in the U.S.

House of Representatives. The bill has been referred to five House committees: Energy and Commerce, Oversight and Accountability, Science,

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Space, and Technology, Transportation and Infrastructure, and Armed Services. The bill proposes to phase out the production of nonessential uses of PFAS and prohibit releases of all PFAS.

Whether H.R.8074 will become law is uncertain. Progress on better technology, labeling, mitigation, and bans will vary from place to place. PFAS will continue to be the subject of scientific research, we hope. In the meantime, water utilities will do their part.

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